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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/713,441	LINZER, ELLIOT N.	
	Examiner	Art Unit	
	Bernard Krasnic	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. The amendment filed 5/07/2007 have been entered and made of record.

2. In response to the amendments filed on 5/07/2007:

The "Objections to the drawings" have been entered and therefore the Examiner withdraws the objections to the drawings.

The "Objections to the abstract and specification" have been entered and therefore the Examiner withdraws the objections to the abstract and specification.

The "Objections to the claims" have been obviated by the amendment and therefore have been withdrawn.

The "Claim rejections under 35 U.S.C. 112, second paragraph" have been obviated by the amendment and therefore have been withdrawn.

3. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's arguments filed 5/07/2007 have been fully considered but they are not persuasive.

The Applicant alleges, "Claim 1 provides a step ..." in page 16, and states respectively that Linzer's Fig. 5 shows an active portion and a blank portion of a frame but does not show the amended limitation of a third portion between the active portion and the blank portion as presently claimed. However the Examiner disagrees because

looking at Figs. 2-3 and 5 of Linzer '102, it is clearly seen that there are three regions as stated by the amended claims limitations. There is (1) a non-encoded inactive region, (2) an encoded inactive region [between the non-encoded inactive region and the encoded active region] and (3) the encoded active region. Therefore Linzer '102 does disclose a transition portion between an active portion and a blank portion [see applicant's specification, page 4, lines 13-14, the transition portion may contain either active video or may be blank]. But to further clarify the 35 U.S.C. 103 rejection, a new reference Lumelsky et al (US 5,119,082) is applied to also teach a transition portion as seen in Fig. 2A [the transition portion is the non-visible active video region while the active portion is the visible active video portion]. Therefore, independent claim 1 and dependent claims 2-9 are still not in condition for allowance. Similarly independent claim 10 and dependent claims 11-15 are still not in condition for allowance.

The Applicant alleges, "Claim 16 provides ..." in page 16, and states respectively that Vogel does not disclose the size and position of the active region. Firstly the Examiner will raise a 35 U.S.C. 112, first paragraph, new matter issue on this amended limitation of a size and position determination of the active region. The Applicant's specification does not specifically or reasonably convey determining the actual size and position of the active region. All the Applicant discloses is detecting the true active region by using the 4-set parameters T, B, L, R [see Applicants specification, page 5-6, Fig. 2]. Therefore the Examiner is led to believe that the size and position are just possible outcomes from the 4-set parameters T, B, L, R. In this reasoning, the Examiner still believes that the art rejection using Vogel in view of Linzer still discloses

the amended limitations because Linzer '102 also discloses the truly active region and does calculate the 4-set parameters T, B, L, R [see Linzer '102, Figs. 3 and 5, col. 2, lines 4-10, col. 3, lines 14-17]. Therefore, independent claim 16 and dependent claims 17-19 are still not in condition for allowance.

The Applicant alleges, "Claim 20 provides ..." in page 17, and states respectively that both Vogel and Hua don't teach or suggest generating a plurality of parameters defining a signature of a segment independent of a content of the segment. The Examiner firstly will acknowledge that Hua does suggest content dependency when detecting commercial segments, but Vogel does not suggest this content based dependency. Vogel clearly states that features are extracted to the frame for comparisons to detect commercial segments. This feature extraction is not limited to content based data but either content or non-content based data. The new reference Wright et al (US 2005/0010944 A1) is used to show that the features could be content and non-content / identification data (see Wright, Fig. 2, abstract, [0013], [0017], [0024]) and that the non-content features are what actually detect the commercial segments. Therefore, independent claim 20 and dependent claim 21 are still not in condition for allowance.

The Applicant alleges, "Furthermore, Linzer appear to be non-analogous art ..." in pages 17-18, and states that the Linzer and Vogel references are non-analogous art and that Linzer '102 "appears to have been chosen only because it is Applicant's own work which is improper hindsight". Firstly the Examiner would like to state that the Linzer '102 reference is published over a year prior to the current applications filing date

and therefore is a valid reference. Secondly, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In response to applicant's argument that Linzer is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Linzer '102 is analogous art because it is discussing the typical video frame setup which has the 4-set parameters T, B, L, R which helps Vogel's teachings of video frames.

The Applicant alleges, "Furthermore, the alleged motivation to combine/modify Vogel with Linzer ..." in page 18, and states respectively that the motivation to combine/modify Vogel with Linzer "appears to be a conclusory statement lacking any support". In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Linzer is reducing the complexity by eliminating the inefficient waste of bits [see Linzer '102, col. 2, lines 4-10, col. 3, lines 14-17] which helps reduce Vogel's broadcasting transmission bandwidth.

The Applicant alleges, "Furthermore, the alleged motivation to combine/modify Vogel with Hua" in page 18 and states respectively that the motivation to combine/modify Vogel with Hua appears to be a conclusory statement lacking any support". In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Hua merges and generates commercial and non-commercial blocks of content by differentiating between the two [see Hua, abstract].

Therefore, the presently claimed invention is not patentable as will be discussed further in the rejections below.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 16-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re claims 16-17: The amendment has incorporated the limitations of determining the size and position of the active region. The Applicant's specification does not specifically or reasonably convey determining the actual size and position of the active region. All the Applicant discloses is detecting the true active region by using the 4-set parameters T, B, L, R [see Applicants specification, page 5-6, Fig. 2]. Therefore the Examiner is led to believe that the size and position are just possible outcomes from the 4-set parameters T, B, L, R. Therefore, the claims contain new subject matter because these possible outcomes are not reasonably conveying the actual determination of the size and position of the active region.

Claims 18-19 are dependent upon claims 16-17.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re Claim 8: The limitations "said predetermined threshold" comprises a "first threshold" and a "second threshold" renders this claim indefinite because it is unclear how the one value "said predetermined threshold" could consist of two values.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-6 and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel (US 2003/0145320 A1, as applied in previous Office Action), in view of Linzer (US 6,463,102 B1, as applied in previous Office Action) and Lumelsky et al (US 5,119,082).

Re Claim 1: Vogel discloses a method for classifying a first video type / commercial and a second video type / television program in a video signal / television signal having a plurality of frames (see abstract, lines 1-2, paragraph [0031], lines 1-11), comprising of (A) generating a plurality of first parameters / feature extractor (33) in a first of said frames / picture (see Fig. 3, paragraph [0031], lines 1-11); (B) generating a plurality of

second parameters / feature extractor (34) in a second of said frames / delayed picture, wherein said second frame follows said first frame (this delay could be any time delay and is understood to be a delay of one to a number of frames) (see Fig. 3, paragraph [0031], lines 1-11); (C) comparing / comparator (36) said first parameters with said second parameters to generate a comparison value / comparator of the two feature extractors (see Fig. 3, paragraph [0031], lines 1-11, paragraphs [0009], [0006], [0008] and [0013]); and (D) generating a signal indicating / commercial presence indicating signal (see paragraph [0006]) (i) said first video type / commercial when said comparison value is greater than a predetermined threshold / preset threshold (see Fig. 3, paragraph [0031], lines 1-11, paragraph [0009]) and (ii) said second video type / television program when said comparison value is less than said predetermined threshold (if it isn't a commercial, it is just continuing television program).

However, Vogel fails to disclose or suggest the transition portion is between an active portion and a blank portion for the first and second frames [Vogel discloses the two frames].

Linzer discloses the transition portion / encoded inactive region [between the non-encoded inactive region and the encoded active region] is between an active portion / encoded active region and a blank portion / non-encoded inactive region of a frame (see Figs. 2-3 and 5, col. 2, lines 4-10, col. 3, lines14-17, also see Applicant's specification, page 4, lines 13-14, the transition portion may contain either active video or may be blank). Lumelsky also discloses the transition portion / non-visible active

video region is between an active portion / visible active video portion and a blank portion / non-active video portion of a frame (see Lumelsky, Fig. 2A).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vogel's method using Linzer's and Lumelsky's teachings by including the specific frame setup for each frame in order to further enhance Vogel's feature extractor by establishing the four parameters T, B, L, R which help reduce Vogel's broadcasting transmission bandwidth by eliminating the inefficient waste of bits [see Linzer '102, col. 2, lines 4-10, col. 3, lines 14-17].

Re Claim 2: Vogel further discloses (i) said first video type comprises a commercial / commercial and (ii) said second video type comprises a program / television program (see abstract, lines 1-2, paragraph [0031], lines 1-11).

Re Claim 3: Linzer further discloses wherein said first parameters (Vogel first feature extractor 33) comprise (i) a first T parameter that represents a first number of top lines in said first transition portion, (ii) a first B parameter that represents a first number of bottom lines in said first transition portion, (iii) a first L parameter that represents a first number of left columns in said first transition portion, and (iv) a first R parameter that represents a first number of right columns in said first transition portion (see Linzer, Figs. 2-3 and 5, col. 3, lines 14-17, L and R are the number of black columns on each of the left and right edges, T and B are the number of black rows on each of the top and bottom edges).

Re Claim 4: Linzer further discloses said first (Vogels first frame from 33) transition portion comprises a plurality of pixels with no material non-black content (see Figs. 2-3 and 5, col. 3, lines 14-17, no material non-black content is basically black content and Linzer's transition / encoded inactive region is basically black content).

Re Claim 5: Linzer further discloses said second parameters (Vogel second feature extractor 34) comprise (i) a second T parameter that represents a second number of top lines in said second transition portion, (ii) a second B parameter that represents a second number of bottom lines in said second transition portion, (iii) a second L parameter that represents a second number of left columns in said second transition portion, and (iv) a second R parameter that represents a second number of right columns in said second transition portion (see Linzer, Figs. 2-3 and 5, col. 3, lines 14-17, L and R are the number of black columns on each of the left and right edges, T and B are the number of black rows on each of the top and bottom edges).

Re Claim 6: Linzer further discloses said second (Vogels second frame from 34) transition portion comprises a plurality of pixels with no material non-black content (see Figs. 2-3 and 5, col. 3, lines 14-17, no material non-black content is basically black content and Linzer's transition / encoded inactive region is basically black content).

Re Claim 8 [as best understood by the Examiner]: Vogel further discloses said predetermined threshold / preset threshold comprises (i) a first threshold to determine if said first frame and said second frame are part of an unbroken segment (see paragraph [0031], lines 1-11, paragraph [0009], the preset threshold is the first threshold and it is used to determine if the first and the second frames are the same using a comparator which tell if it is part of an unbroken segment such as part of a commercial) and (ii) a second threshold to determine if said first parameters match said second parameters (see paragraph [0031], lines 1-11, paragraph [0009], the preset threshold is the second threshold and it may be the same value as the first threshold, resulting in a determination if the first and second frames have the same extracted features using the comparator).

Although Vogel doesn't specifically disclose, as recited in claim 9, said video signal comprises a digital video signal, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have such a feature where the video signal is a digital video signal because Vogel's television video signal is described as being received from a satellite, requiring bandwidth, and being transported by modems (see paragraph [0022] and [0023]), which are typical components of a digital video system.

Re Claim 10: Vogel discloses an apparatus / commercial detector comprising a first detector circuit / feature extractor (33,34) configured to generate (i) a plurality of first

parameters / feature extractor in a first frame / picture of a video signal / television video having a plurality of frames (see Fig. 3, paragraph [0031], lines 1-11) and (ii) a plurality of second parameters / feature extractor (34) in a second frame / delayed picture of said video signal, wherein said second frame follows said first frame (the second frame or the delayed picture could be any time delay and is understood to be a delay of one to a number of frames); and a second detector circuit / comparator (36) configured to (i) generate a comparison value / comparator of the two feature extractors by comparing said first parameters with said second parameters (see Fig. 3, paragraph [0031], lines 1-11, paragraphs [0009], [0006], [0008], [0013] and [0015]) and (ii) generate a signal indicating / signal indicating commercial or program presence (a) a first video type / commercial when said comparison value is greater than a predetermined threshold / preset threshold (see Fig. 3, paragraph [0031], lines 1-11, paragraphs [0009] and [0015]) and (b) a second video type / television program when said comparison value is less than said predetermined threshold (if it isn't a commercial, it is just continuing television program).

However, Vogel fails to disclose or suggest the transition portion is between an active portion and a blank portion for the first and second frames [Vogel discloses the two frames].

Linzer discloses the transition portion / encoded inactive region [between the non-encoded inactive region and the encoded active region] is between an active portion / encoded active region and a blank portion / non-encoded inactive region of a frame (see Figs. 2-3 and 5, col. 2, lines 4-10, col. 3, lines14-17, also see Applicant's

specification, page 4, lines 13-14, the transition portion may contain either active video or may be blank). Lumelsky also discloses the transition portion / non-visible active video region is between an active portion / visible active video portion and a blank portion / non-active video portion of a frame (see Lumelsky, Fig. 2A).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vogel's method using Linzer's and Lumelsky's teachings by including the specific frame setup for each frame in order to further enhance Vogel's feature extractor by establishing the four parameters T, B, L, R which help reduce Vogel's broadcasting transmission bandwidth by eliminating the inefficient waste of bits [see Linzer '102, col. 2, lines 4-10, col. 3, lines 14-17].

Although the first detector circuit or the feature extractor of Vogel as modified by Linzer's (T,B,L,R) four parameters as discussed in claims 3 and 5 above is not specifically disclosed, as recited in claim 11, as a 4-set detector, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have such a feature of a 4-set detector because Vogel's detector circuit or feature extractor as modified by Linzer will need four detectors to establish the four parameters (T,B,L,R) used in Vogel's comparator as modified by Linzer to indicate the presence of a commercial.

Re Claim 12: Vogel further discloses said second detector circuit comprises a segment detector / commercial signature (45) configured to receive said second parameters following receipt of said first parameters (see Fig. 4, paragraphs [0009], [0020] and [0033]-[0035], the processor uses the received feature extractor data along with the stored [memory 46] signatures of commercials to detect the commercial segments).

Re Claim 13: Vogel further discloses said first detector circuit / feature extractor (33, 34) generates said first parameters / feature extractor of first frame (33) and said second parameters / feature extractor of second frame (34) in response to (i) a threshold signal / bandwidth limit and (ii) one or more samples / reduction of picture from said frames (see Fig. 3, paragraph [0031], lines 1-11, the feature extractor extracts a 64 pixel picture by reducing a larger picture by using the samples or pixels of the larger picture, the reduction is done to satisfy the bandwidth limit which is needed).

Re Claim 14: Vogel further discloses a controller (i) connected between said first detector circuit and said second detector circuit and (ii) configured to control said first detector circuit and said second detector circuit (the controller is understood to be the connector shown as a line which connects components 33 and 34 to 36 as shown in Fig. 3, it controls the first detector 33 and 34 as well as the second detector 36 by being the means for correspondence of instructions and information basically between the two).

Re Claim 15: Vogel further discloses a change in said signal indicates / signal indicating commercial or program presence a transition between a first program type / commercial and a second program type / television program (see paragraph [0031], lines 1-11, paragraph [0009]).

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel as modified by Linzer and Lumelsky as applied to claims 1, 3, and 5 above, and further in view of McGee et al (US 2003/0117530 A1, as applied in previous Office Action). The teachings of Vogel as modified by Linzer and Lumelsky have been discussed above.

However, Vogel as modified by Linzer and Lumelsky fails to disclose or fairly suggest that the comparison is made by using the sum of the absolute value of the difference between parameters of two frames.

McGee discloses comparing (A) a sum of (i) a first absolute value of a first difference between said first T parameter and said second T parameter plus (ii) a second absolute value of a second difference between said first B parameter and said second B parameter plus (iii) a third absolute value of a third difference between said first L parameter and said second L parameter plus (iv) a fourth absolute value of a fourth difference between said first R parameter and said second R parameter with (B) said predetermined threshold (see Fig. 3, equation $D = \sum_{i=1}^{N} \left| H_C(i) - H_p(i) \right|$ under paragraph [0034], this equation teaches the sum of the absolute value of the difference between the parameters of two frames being used for the detection of a commercial).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Vogel's method, as modified by Linzer and Lumelsky, using McGee's teachings by including a sum of the absolute value of the difference between the parameters of the two frames to Vogel's comparator, as modified by Linzer and Lumelsky, as the value to be compared to the preset threshold in order to enhance the comparison by calculating a match and detection using a higher order algorithm.

12. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel in view of Linzer.

Re Claim 16 [as best understood by the Examiner]: Vogel discloses a method / commercial detector for distinguishing between a commercial and a program in a digital video signal having a plurality of frames (see paragraph [0022] and [0023], television signals sent by satellite, requiring bandwidth, and being transported by modems are typical components of a digital video system), comprising the steps of (A) determining (33) both a first size and a first position of a first truly active region / feature extractor of first frame (33) in a first of said frames; (B) determining (34) both a second size and second position of a second truly active region in a second of said frames of a second truly active region / feature extractor of second frame (34) in a second of said frames, wherein said second frame follows said first frame (the second frame or the delayed picture could be any time delay and is understood to be a delay of one to a number of

frames) (see Fig. 3, paragraph [0031], lines 1-11, paragraphs [0009], [0006], [0008], [0013], [0031] and [0015]); and (C) generating a signal / signal indicating presence of a commercial or program signature to indicate a lack of a scene transition / no change in presence signature between said commercial and said program when both / extracted features (33) said first size and said first position of said first truly active region are substantially similar to both / extracted features (34) said second size and said second position of said second truly active region (see Fig. 3, paragraph [0031], lines 1-11, paragraphs [0009] and [0020], when the two extracted features are the same, there is no change in the signal indicator whereas if the two extracted features are not the same, the signal indicator changes).

However, Vogel fails to disclose or suggest that the extracted features are the size and position of the truly active region for the first and second frames [Vogel discloses the two frames].

Linzer discloses a truly active region / encoded active region and calculating the four parameters T, B, L, R (T, B, L, R are the number of black columns inserted on each of the left and right edges and the number of black rows inserted on the top and bottom edges) (see Figs. 3 and 5, col. 2, lines 4-10, col. 3, lines 14-17, these T, B, L, R parameters result in the outcome of generating the size and position of the truly active region).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vogel's method using Linzer's teachings by including the specific frame setup for each frame to develop the size and position of

Vogel's truly active region in order to further enhance Vogel's feature extractor by establishing the four parameters T, B, L, R which help reduce Vogel's broadcasting transmission bandwidth by eliminating the inefficient waste of bits [see Linzer '102, col. 2, lines 4-10, col. 3, lines 14-17].

Re Claim 17: Vogel further discloses generating said signal to indicate / signal indicating presence of commercial or program signature a presence of said scene transition / change in presence signature between said commercial and said program when at least one of said first size and said first position of said first truly active region [Vogel's feature extractor 33 that determined the first size and position using Linzer's teachings] is not substantially similar / they differ in comparator (36) to a corresponding at least one of said second size and said second position of said second truly active region [Vogel's feature extractor 34 that determined the first size and position using Linzer's teachings] (see [0009], a change is present when the two features of the frames are different).

Re Claim 18: Vogel further discloses generating a first segment signature / program signature associated with said first frame where said scene transition represents a change from said program to said commercial; and generating a second segment signature / commercial signature associated with said second frame (see [0009], if the first and second frames have different extracted features, then it shows that there is a change from a program signature to a commercial signature).

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel as modified by Linzer as applied to claims 16-18 above, and further in view of Hua et al (US 2004/0161154 A1, as applied in previous Office Action). The teachings of Vogel as modified by Linzer have been discussed above.

However, Vogel as modified by Linzer fails to disclose or fairly suggest an implementation of a commercial advance and skip.

Hua discloses implementing a commercial advance by skipping said frames having said second segment signature / commercial signature; and returning from said commercial advance when said frames have said first segment signature / program signature (see abstract, lines 3-6, paragraph [0005], lines 1-3, paragraph [0018], lines 10-18, paragraph [0019], the second segment signatures are used to skip commercials and return to the first segment signature or program in order to merge and generate non-commercial blocks of content and in order to avoid viewing/recording commercial content).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Vogel's method and system, as modified by Linzer using Hua's teachings by including the capability to skip and advance through segments in order to provide a merge and generation of commercial and non-commercial blocks of content and avoid viewing/recording commercial content (see Hua, paragraph [0005], lines 1-3).

14. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel in view of Hua and further in view of Wright et al (US, 2005/0010944 A1).

Re Claim 20: Vogel discloses a method / commercial detector for segmenting / signature a video signal into a plurality of program segments and a plurality of commercial segments, comprising the steps of (A) generating a plurality of first parameters / feature extractor (33) independent of a content [features may be content or non-content data, Vogel never specifies] (see Fig. 3, paragraph [0031], lines 1-11, paragraph); (C) generating a plurality of second parameters / feature extractor (34) (see Fig. 3, paragraph [0031], lines 1-11); (D) comparing / comparator (36) said second parameters (34) to said first parameters (33) (see Fig. 3, paragraph [0031], lines 1-11, paragraph [0009]); and (E) classifying said second segment / signature as a program as one of said program segments where said first parameters (33) and said second parameters (34) are substantially similar / not different (see Fig. 3, paragraph [0031], lines 1-11, paragraphs [0009] and [0020], if they are different an indication of a commercial is made but if it isn't a commercial, it is just a television program).

However, Vogel fails to specifically disclose that the first and second parameters defining a signature for a first and second program segment of a first segment of said program segments independent of a content of said first segment. Vogel even though silently teaches content independency as claimed, Wright will clearly state it below.

Hua discloses that (A) the first set of parameters define a signature for a first program segment; (B) detecting the end of said first program segment; and (C) the second set of parameters define a signature for a second segment (see abstract, lines

3-6, paragraph [0005], lines 1-3, paragraph [0018], lines 10-18, paragraph [0019], Hua uses segment signatures as the parameters and it is using these segment signatures that detect and define a commercial or a program segment which allow for the further process of merging and generating segments of commercial or non-commercial blocks of content through comparison with threshold criteria and in order to avoid viewing/recording commercial content).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vogel's method using Hua's teachings by replacing Vogel's feature extractor parameters with Hua's signature for a first and second segment parameters in order to provide a merge and generation of commercial and non-commercial blocks of content and avoid viewing/recording commercial content (see Hua, paragraph [0005], lines 1-3).

However, Vogel in view of Hua still fail to specifically suggest content independency [Vogel even though silently teaches content independency as claimed, Wright will clearly state it below].

Wright discloses parameters / identification data (22) defining a first signature / program signature of a first segment / program of said program segments independent of a content of said first segment (see Fig 2, paragraphs [0013], [0017], and [0024], Wright shows that the identification data could be a parameter which could be extracted by Vogel's feature extractor and this identification data is clearly distinct than the content 18, this identification data sees if the time compression is present and presence

of this time compression corresponds to program while no presence corresponds to commercial).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Vogel's method, as modified by Hua using Wright's teachings by specifically including the idea that the parameters are content independent in order to further enhance the identification of commercial and programs segments (see Wright, paragraph [0024]).

Re Claim 21: Hua further discloses said second parameters indicate a start of active video content (see abstract, lines 3-6, paragraph [0018], lines 10-18, paragraph [0019], Hua uses segment signatures as the parameters and it is using these segment signatures that detect and define a start and end of a commercial or a program segment which allow for the further process of merging and generating segments of commercial or non-commercial blocks of content through comparison with threshold criteria).

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic
July 26, 2007

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SUPERVISORY PATENT EXAMINER

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